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EXAMINER

ADEGEYE, OLUWASEUN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,404	Applicant(s) LEE, SANG-HAK	
	Examiner OLUWASEUN A. ADEGEYE	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/25/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 109 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/25/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 4, 20, 41, 45 - 49, 64, 80 - 88 and 100 - 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaji (US 6, 904, 406 B2) in view of well known Knowledge in the art.

As to **claim 1**, Yamaji discloses a display apparatus (see column 12, lines 15 – 22) connected with an external storage medium (18) disposed external to the display apparatus, the apparatus comprising (see fig. 1):

a receiving processor (11) that receives at least a digital video signal and/or an audio signal (see column 3, lines 27 - 29 and column 6, lines 36 – 39) ;

a controller (21) that, if a user commands storage of the received digital video signal and audio signal, stores the received digital video signal and audio signal in the external storage medium (see column 8, lines 26 – 42 and column 5, lines 43 – 51); and

a port disposed on the display apparatus, through which the received digital video signal and audio signal are transmitted from the display apparatus to the external storage medium (see column 6, lines 20 – 21 and fig. 7. Fig. 7 clearly discloses a connection between the apparatus and the external storage medium whereas the cited

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column discloses that the connections can either be USB, IEEE 1394, or wireless LAN and home RF).

wherein the controller is connected to the external storage through the port (see column 6, lines 20 – 21 and fig. 7. Fig. 7 clearly discloses a connection between the apparatus and the external storage medium whereas the cited column discloses that the connections can either be USB, IEEE 1394, or wireless LAN and home RF).

Yamaji discloses digital audio but does not disclose digital video.

Official notice is taken that digital video is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used digital video in place of digital audio to present users with a visual representation of data.

As to **claim 20**, Yamaji discloses a display apparatus connected with an external storage medium, the apparatus comprising (see column 3, lines 25 – 32 and column 5, lines 47 – 51):

a receiving processor (fig. 1, 11) that receives a digital video signal and/or an audio signal (see column 3, lines 40 - 44).

a compression (fig. 1, 121) and decompression (fig. 1, 122) unit that

if a user requires storing of the received digital video signal and/or audio signal, is set to a compression mode, and compresses the digital video signal and/or the audio signal received from the receiving processor (see fig. 3(b), column 5, lines 36 – 51), and

if the user requires reproduction of the digital video signal and/or audio signal stored in the external storage medium, is set to a decompression mode, and restores

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the digital video signal and/or the audio signal received from an external storage medium; an output unit to output the reproduced digital video signal and/or audio signal (see fig. 3(b), column 5, line 52 – column 6, line 2); and

a controller (14) that

if the user requires the storage, controls the compression and decompression unit in the compression mode and stores the compressed digital video signal and/or audio signal compressed by the compression and decompression unit in the external storage medium in real time (see column 5, line 35 – column 6, line 2 and column 12, line 37 – 43), and

if the user requires the reproduction, outputs the digital video signal and/or audio signal from the external storage medium to the output unit through the compression and decompression unit (see column 5, line 52 – column 6, line 2 and column 12, lines 12 - 22).

As to **claim 41**, this is a method claim corresponding to the apparatus claim 20. Therefore, claim 41 is analyzed and rejected as previously discussed with respect to claim 20.

As to **claim 49**, this is similar to claim 1 only in that the limitation "an output unit that outputs the digital video signal" is additionally recited.

Yamaji clearly discloses an output unit (13) that outputs the digital audio signal (see fig. 1).

Yamaji discloses digital audio but does not disclose digital video.

Official notice is taken that digital video is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used digital video in place of digital audio to present users with a visual representation of data.

As to **claim 100**, grounds for rejecting claim 1 apply to claim 100 in its entirety.

As to **claim 2**, Yamaji discloses the display apparatus of claim 1, wherein the controller, according to a request from the user and when the received digital video signal and/or audio signal are stored in the external storage medium, determines whether the received digital video signal and/or audio signal is to be output through the port (see column 8, lines 26 - 42).

As to **claim 3**, Yamaji discloses the display apparatus of claim 1, wherein the receiving processor receives the digital video signal and/or the audio signal in the form of a digital television broadcast signal (see column 6, lines 33 - 39).

As to **claim 4**, Yamaji discloses the display apparatus of claim 3, wherein, when the received digital video signal and/or audio signal is output in real time through the port, the controller controls the storage in the external storage medium (see column 8, lines 26 - 42, column 5, lines 41 - 51 and column 12, lines 37 - 43).

As to **claim 45**, Yamaji discloses the display apparatus of claim 1, further comprising a housing which houses the receiving processor, the controller, and the output unit and which has an interface, wherein the external storage medium is external to the housing (see fig. 7), and the controller controls the interface to transmit the received digital video signal and/or audio signal through the interface (see column 6,

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lines 20 – 21) to the external storage medium to be stored (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43).

As to **claim 46**, Yamaji discloses the display apparatus of claim 45 wherein the interface is a Universal Serial Bus (USB) interface (see column 6, lines 20 – 21).

As to **claim 47**, Yamaji discloses the display apparatus of claim 45, further comprising an external storage device including the external storage medium and another controller which controls storage and retrieval of data including the received digital video signal and/or audio signal with respect to the external storage medium wherein the controller sends instructions through the interface to instruct the another controller to store the received digital video signal and/or audio signal in the external storage medium(see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43).

As to **claim 48**, Yamaji discloses the display apparatus of claim 45, further comprising an external storage device includes the external storage medium, wherein the controller controls the storage of the received digital video signal and/or audio signal in the external storage medium through the interface (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43).

As to **claim 64**, grounds for rejecting claim 1 apply to claim 64 in its entirety.

As to **claim 80**, Yamaji discloses the display apparatus of claim 1, wherein the receiving processor receives the digital video signal and/or the audio signal from an external audio/video (AV) device (see column 6, lines 33 – 39).

As to **claim 81**, Yamaji discloses the display apparatus of claim 1, wherein the received digital video and/or audio signal are stored in the external storage medium in a real time manner (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43).

As to **claim 82**, Yamaji disclose the display apparatus of claim 1, wherein the received digital video and/or audio signal are stored directly in the external storage medium (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43) .

As to **claim 83**, Yamaji discloses the display apparatus of claim 3, wherein the external storage medium is incorporated in a PDA (see column 4, lines 51 - 54).

As to **claim 84**, Yamaji discloses the apparatus of claim 3, wherein the external storage medium is incorporated in an MP3 player (see column 4, lines 51 - 54).

As to **claim 85**, Yamaji discloses the display apparatus of claim 3, wherein the external storage medium is incorporated in a digital video recorder (see column 4, lines 51 - 54).

As to **claim 86**, grounds for rejecting claim 46 apply to claim 86 in its entirety.

As to **claim 87**, Yamaji discloses the display apparatus of claim 3, wherein the controller reproduces the stored, digital video signal and/or audio signal in response to a user command (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43) .

As to **claim 88**, Yamaji discloses the display apparatus of claim 86, further comprising a display screen (see column 12, lines 15 – 22) for displaying the received digital video signal and a speaker for outputting the received digital audio signal (see column 4, lines 2 – 10).

As to **claims 101 - 106** grounds for rejecting claims 83 - 88 apply to claims 101 - 106 in its entirety.

3. Claims 13 – 18, 30 – 37, 39 – 40, 50 – 56, 59 – 63, 65 - 70, 73 – 77 and 89 - 91 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyatake et al (US 2003/0192058 A1).

As to **claim 13**, Miyatake discloses a display apparatus capable of being connected to an external storage medium, the apparatus comprising (see fig. 1 and [032]):

a receiving processor to receive a digital video signal and/or an audio signal(see [32]);

a controller (fig. 6, 60) that forms a virtual file system for the external storage medium (see [40] and [41]),

if a user requires storage of the received digital video signal and/or audio signal, stores the digital video signal and/or audio signal received through the receiving processor in the external storage medium in real time with reference to information generated on the basis of the formed virtual file system (see [32], [40], [41], [43] and [56]), and

if the user requires reproduction of the digital video signal and/or audio signal stored on the external storage medium, reproduces the stored digital video signal and/or an audio signal from the external storage medium with reference to the information generated on the basis of the virtual file system (see [40] and [41]); and

an output unit (fig. 1, 1), to output the reproduced digital video signal and/or audio signal (see [32 and [40]).

As to **claim 30**, this is a method claim corresponding to the apparatus claim 1. Therefore, claim 30 is analyzed and rejected as previously discussed with respect to claim 1.

As to **claim 14**, Miyatake discloses the display apparatus of claim 13, wherein the controller downloads a file system stored in the external storage medium and uses the downloaded file system to form the virtual file system (see [40] and [58]. The downloaded file is the list of representative images).

As to **claim 15**, Miyatake discloses the display apparatus of claim 13, wherein the controller controls the storage or the reproduction to output the digital video signal and/or audio signal received through the receiving processor to the output unit in real time (see [32], [40], [43] and [56]).

As to **claim 16**, Miyatake discloses the display apparatus of claim 13, wherein the information generated on the basis of the virtual file system comprises management information for the external storage medium (see [40] – [43]).

As to **claim 17**, Miyatake discloses the display apparatus of claim 16, wherein the management information comprises time information corresponding to a storage

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capacity of the external storage medium (see [41]), and a list including the stored digital video signal and/or the audio signal and additional digital video and/or audio signals stored in the external storage medium (see [40]).

As to **claim 18**, Miyatake discloses the display apparatus of claim 17, wherein the controller generates the management information so that the management information is output in an on-screen display format through the output unit (see [40] and [41]).

As to **claim 31**, Miyatake discloses the method of claim 30, further comprising: forming a virtual file system for the external storage medium (see [40] – [43] and [58]. The representative images are part of the virtual file system);

generating management information for the external storage medium using the virtual file system (see [41] – [43]); and

providing the generated management information to the user before the user requires the storage or the reproduction of the received digital video signal and/or audio signal (see [40] – [43]).

As to **claim 32**, Miyatake discloses the method of claim 31, wherein the forming the virtual file system is performed if an input of the user requires control of the external storage medium by the display apparatus (see [40] - [43]).

As to **claim 33**, this is a method claim corresponding to the apparatus claim 14. Therefore, claim 33 is analyzed and rejected as previously discussed with respect to claim 14.

As to **claim 34**, this is a method claim corresponding to the apparatus claim 18. Therefore, claim 34 is analyzed and rejected as previously discussed with respect to claim 18.

As to **claim 35**, this is a method claim corresponding to the apparatus claim 11. Therefore, claim 35 is analyzed and rejected as previously discussed with respect to claim 11.

As to **claim 36**, this is a method claim corresponding to the apparatus claim 10. Therefore, claim 36 is analyzed and rejected as previously discussed with respect to claim 10.

As to **claim 37**, this is a method claim corresponding to the apparatus claim 4. Therefore, claim 37 is analyzed and rejected as previously discussed with respect to claim 4.

As to **claim 39**, Miyatake discloses the method of claim 30, wherein, according to a request from the user and when the received digital video signal and/or the audio signal are stored, it is determined whether the received digital video signal and/or audio signal are to be output through the display unit (see [40]).

As to **claim 40**, Miyatake discloses the method of claim 31, wherein the providing the generated management information comprising providing information required by the user for use by the user in controlling the external storage medium (see [40] – [43]).

As to **claim 50**, Miyatake discloses the reproducing apparatus of claim 49, wherein the controller further retrieves the stored signal from the external storage

medium and controls the output unit to output the retrieved signal (see [32], [40] and [43]).

As to **claim 51**, Miyatake discloses the reproducing apparatus of claim 49, wherein the controller further stores the received signal in the external storage medium as the signal is received so as to record the signal in real time (see [56]).

As to **claim 52**, Miyatake discloses the reproducing apparatus of claim 51, wherein the controller further outputs the received signal through the output unit in real time as the received signal is being stored (see [54], [56] and [58]).

As to **claim 53**, Miyatake discloses the reproducing apparatus of claim 51, wherein the controller further retrieves the stored signal from the external storage medium and controls the output unit to output the retrieved signal (see [40] – 43]).

As to **claim 54**, Miyatake discloses the reproducing apparatus of claim 53, wherein the controller further outputs the received signal through the output unit in real time such that the received signal is output with the retrieved signal (see [43], [55] and [56]).

As to **claim 55**, grounds for rejecting claim 45 apply to claim 55 in its entirety.

As to **claim 56**, grounds for rejecting claim 45 apply to claim 56 in its entirety.

As to **claim 59**, grounds for rejecting claim 1 apply to claim 59 in its entirety.

As to **claim 60**, grounds for rejecting claim 16 apply to claim 60 in its entirety.

As to **claim 61**, grounds for rejecting claim 16 apply to claim 61 in its entirety.

As to **claim 62**, grounds for rejecting claim 17 apply to claim 62 in its entirety.

As to **claim 63**, Miyatake discloses the reproducing apparatus of claim 60, wherein the controller further uses the generated virtual file system to retrieve the stored digital video and/or audio signal to be output through the output unit (see [40] – [43]).

As to **claim 65**, Miyatake discloses the controller of claim 64, wherein the controller further retrieves the stored signal from the external storage medium and controls the output unit to output the retrieved signal (see [40] – [43]).

As to **claim 66**, Miyatake discloses the controller of claim 64, wherein the controller further controls the received signal to be transmitted to and recorded in the external storage medium as the signal is received so as to record the signal in the external storage medium in real time (see [40] – [43] and [56]).

As to **claim 67**, Miyatake discloses the controller of claim 66, wherein the controller further controls the received signal to be output through the output unit in real time (see [40] – [43] and [56]).

As to **claim 68**, Miyatake discloses the controller of claim 66, wherein the controller further retrieves the stored signal from the external storage medium and controls the output unit to output the retrieved signal (see [40] – [43]).

As to **claim 69**, grounds for rejecting claim 54 apply to claim 69 in its entirety.

As to **claim 70**, grounds for rejecting claim 45 apply to claim 70 in its entirety.

As to **claim 73**, Miyatake discloses the controller of claim 64, wherein the controller controls the storage of the received signal on the external storage medium (see fig. 1 and [40] – [43]).

As to **claim 74**, Miyatake discloses the controller of claim 73, wherein the controller further creates a virtual file system so as to manage the received signal being recorded on the external storage medium (see [40] – [43]).

As to **claim 75**, Miyatake discloses the controller of claim 64, wherein the controller further generates a virtual file system so as to manage the received signal being recorded on the external storage medium (see [40] – [43]).

As to **claim 76**, Miyatake discloses the controller of claim 75, wherein the external storage medium stores additional signals, the generated virtual file system manages the stored signal and the additional signals, and the controller retrieves a selected one of the stored signal and the additional signals according to the virtual file system and outputs the retrieved selected signal through the output unit (see [40] – [43]).

As to **claim 77**, Miyatake discloses the controller of claim 75, wherein the controller further uses the generated virtual file system to retrieve the stored signal to be output through the output unit (see [40] – [43]).

As to **claim 89**, Miyatake discloses the method of claim 30, wherein the storing of the digital video signal and/or the audio signal is performed in real time (see [54] and [56]).

As to **claim 90**, Miyatake discloses the method of claim 30, wherein the digital video signal and/or the audio signal is in the form of a digital television broadcast signal (see [55]).

As to **claim 91**, Miyatake discloses the method of claim 30, wherein the digital video signal and/or the audio signal are received from an external audio/video (AV) device (see fig. 1 and [32]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 19, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaji in view of Kovacevic (US 7,030,930 B2).

As to **claim 5**, Yamaji discloses the display apparatus of claim 4, wherein, when the digital video signal and/or audio signal are reproduced from the external storage medium, the controller displays the reproduced digital video signal and the received digital video signal output in real time together through the port (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43).

Yamaji does not disclose the output unit in a Picture-In-Picture format or in a Picture-By-Picture format.

Kovacevic discloses the output unit in a Picture-In-Picture format or in a Picture-By-Picture format (see column 6, lines 14 – 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added outputting picture-in-picture as taught by Kovacevic

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to the apparatus of Miyatake to provide a system for synchronizing the output of decoded audio data to the presentation of decoded digital video data (see column 2, lines 1 – 3).

As to **claim 19**, grounds for rejecting claim 5 apply to claim 19 in its entirety.

As to **claim 38**, grounds for rejecting claim 5 apply to claim 38 in its entirety.

6. Claims 6 – 12, 21 – 27, 29, 42 – 44, 79 and 107 - 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaji in view of Miyatake.

As to **claim 6**, Yamaji discloses the display apparatus of claim 1. However Yamaji does not disclose wherein if an input of the user requires control of the external storage medium, the controller outputs management information through the port, and uses the management information to manage the storage or reproduction of the received digital video signal and/or audio signal with respect to the external storage medium.

Miyatake discloses wherein if an input of the user requires control of the external storage medium, the controller outputs management information through the output unit, and uses the management information to manage the storage or reproduction of the received digital video signal and/or audio signal with respect to the external storage (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of forming a virtual file system for the external storage medium as taught by Miyatake to the apparatus of Yamaji to provide a

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real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 7**, Miyatake discloses the display apparatus of claim 6, wherein the output unit comprises:

a display unit (fig. 4, 40) to display the received digital video signal (see [40]);
and

a speaker (fig. 1, 1-1) to output the received audio signal (see [40]).

As to **claim 8**, Miyatake discloses the display apparatus of claim 7, wherein the management information for stored digital video signal and/or the audio signal stored in the external storage medium is displayed in an on-screen display format on the display unit (see [40] – [43]).

As to **claim 9**, Miyatake discloses the display apparatus of claim 7, wherein the management information for stored digital video signal and/or the audio signal stored in the external storage medium is output as an audio signal through the speaker (see [40]).

As to **claim 10**, Miyatake discloses the display apparatus of claim 8, wherein the management information comprises time information corresponding to a storage capacity of the external storage medium (see [41]), and a list including the stored digital video signal and/or audio signal and additional digital video signals and/or audio signals stored in the external storage medium (see [40]).

As to **claim 11**, Miyatake discloses the display apparatus of claim 8, wherein the reproduced digital video signal and/or the audio signal are a selected digital video signal

and/or an audio signal selected from a plurality of reproducible digital video signals and/or audio signals stored in the external storage medium and which is selected by a user with reference to the management information (see [40] – [43]).

As to **claim 12**, Miyatake discloses the display apparatus of claim 1, wherein when an input of the user requires control of the external storage medium, the controller outputs through the output unit information that the user can input as a storage request or a reproduction request (see [40] and [41]).

As to **claim 21**, Yamaji discloses the display apparatus of claim 20 but does not disclose wherein the controller forms a virtual file system for the external storage medium, and controls the storage or reproduction of the digital video and/or audio signals with respect to the external storage medium using the virtual file system.

Miyatake discloses wherein the controller forms a virtual file system for the external storage medium, and controls the storage or reproduction of the digital video and/or audio signals with respect to the external storage medium using the virtual file system (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of forming a virtual file system for the external storage medium as taught by Miyatake to the apparatus of Yamaji to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 22**, Miyatake discloses the display apparatus of claim 21, wherein the controller downloads a file system stored in the external storage medium and forms the virtual file system using the downloaded file system (see [40] – [43]).

As to **claim 23**, Miyatake discloses the display apparatus of claim 21, wherein the controller forms the virtual file system if an input of the user requires control of the external storage medium (see [40] – [43]).

As to **claim 24**, Yamaji discloses the display apparatus of claim 20 but does not disclose wherein the controller generates management information for managing the stored digital video signal and/or the audio signal in the external storage medium using the virtual file system, and outputs the management information to the output unit. Miyatake discloses wherein the controller generates management information for managing the stored digital video signal and/or the audio signal on the external storage medium using the virtual file system, and outputs the management information to the output unit (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of making the controller generate management information for managing the stored digital video signal on the external storage medium as taught by Miyatake to the apparatus of Yamaji to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 25**, Miyatake discloses the display apparatus of claim 24, wherein the controller generates the management information so that the management

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information is displayed in an on-screen display format on the output unit (see [40] – [43]).

As to **claim 26**, Miyatake discloses the display apparatus of claim 24, wherein the management information comprises time information corresponding to a storage capacity of the external storage medium (see [41]), and a list including the stored digital video signal and/or audio signal and additional digital video and/or audio signals stored in the external storage medium (see [40] and [43]).

As to **claim 27**, Yamaji discloses the display apparatus of claim 20 but does not disclose wherein, when the received digital video signal and audio signal are output through the output unit in real time, the controller controls the storage or reproduction of the received digital video signal and/or the audio signal with respect to the external storage medium. Miyatake discloses wherein, when the received digital video signal and audio signal are output through the output unit in real time, the controller controls the storage or reproduction of the received digital video signal and/or the audio signal with respect to the external storage medium (see [40] – [43] and [56]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of outputting the received digital video signal through the output unit in real time as taught by Miyatake to the apparatus of Yamaji to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 29**, Yamaji discloses the display apparatus of claim 20 but does not disclose wherein, according to a request of the user and when the received digital video

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signal and/or audio signal are stored in the external storage medium, the controller determines whether the received digital video signal and/or audio signal is to be output using the output unit. Miyatake discloses wherein, according to a request of the user and when the received digital video signal and/or audio signal are stored on the external storage medium, the controller determines whether the received digital video signal and/or audio signal is to be output using the output unit (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of making a user request receiving a digital video and/or audio signal stored on an external storage medium as taught by Miyatake to the apparatus of Yamaji to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 42**, Miyatake discloses the method of claim 41, further comprising:
forming a virtual file system for the external storage medium (see [40] – [41]);
and outputting management information for the external storage medium generated on the basis of the virtual file system, before the compression or the restoration is performed (see [40] – [43]).

As to **claim 43**, Miyatake discloses the method of claim 42, wherein the storing or the restoring the compressed digital video and/or audio signal comprises the user requiring the storage or the reproduction of the compressed digital video and/or audio signal with reference to the output management information (see [40] – [43]).

As to **claim 44**, Miyatake discloses the method of claim 42, wherein the forming the virtual file system is performed if an input of the user requires control of the external storage medium (see [40] – [43]).

As to **claim 79**, Yamaji discloses a computer readable medium encoded with processing instructions for implementing a method of claim 41 performed by a processor (see column 4, lines 10 – 35).

As to **claim 107**, grounds for rejecting claim 31 apply to claim 107 in its entirety.

As to **claim 108**, grounds for rejecting claim 17 apply to claim 108 in its entirety.

As to **claim 109**, grounds for rejecting claim 16 apply to claim 109 in its entirety.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaji in view of Miyatake as applied to claim 27 above, and further in view of Kovacevic.

As to **claim 28**, grounds for rejecting claim 5 apply to claim 28 in its entirety.

8. Claims 57, 58, 71, 72, 78 and 92 - 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyatake in view of Yamaji.

As to **claim 57**, grounds for rejecting claim 46 apply to claim 57 in its entirety.

As to **claim 58**, grounds for rejecting claim 47 apply to claim 58 in its entirety.

As to **claim 71**, grounds for rejecting claim 46 apply to claim 71 in its entirety.

As to **claim 72**, grounds for rejecting claim 47 apply to claim 72 in its entirety.

As to **claim 78**, Yamaji discloses a computer readable medium encoded with processing instructions for implementing a method of claim 30 performed by a processor (see column 4, lines 10 – 35).

As to **claims 92 – 98**, grounds for rejecting claims 82 – 88 respectively apply to claims 92 - 98 in its entirety.

As to **claim 99**, Miyatake discloses the method of claim 90. Miyatake discloses further comprising the step of:

forming a virtual file system for the external storage medium.

However Yamaji discloses wherein the external storage medium is incorporated in a PDA. (see column 4, lines 51 – 54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of removing the external storage medium and playing it back in another apparatus as taught by Yamaji to the apparatus of Miyatake to provide a means capable of encryption and decryption of digital audio data and also certification means (see column 1, lines 55 – 60).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUWASEUN A. ADEGEYE whose telephone number is (571)270-1711. The examiner can normally be reached on Monday - Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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12/02/2008
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